

IN THE CLAIMS:

1.(currently amended) An apparatus for interfacing a frame relay network and an ATM (Asynchronous Transfer Mode) network, comprising:

congestion information extracting means for extracting congestion information from data of one network of said frame relay network and said ATM network;

~~mode setting means for combining said extracted congestion information with congestion information of an output side in accordance with a setting condition; and~~

mode setting means for setting a mode for deciding congestion information of an output side in accordance with a combination of said extracted congestion information and a setting condition; and

congestion information writing means for writing the ~~combined~~ congestion information into data of the other network of said frame relay network and said ATM network in accordance with a mode set by said mode setting means.

2.(currently amended) An apparatus for interfacing a frame relay network and an ATM (Asynchronous Transfer Mode) network, comprising:

congestion information extracting means for extracting congestion information from data of one network of said frame relay network and said ATM network;

mode setting means for combining said extracted congestion information with congestion information of an output side in accordance with a setting condition; and

congestion information writing means for writing the combined congestion information into data of the other network of said frame relay network and said ATM network in accordance with a mode set by said mode setting means.

~~A congestion information setting system as claimed in claim 1, wherein:~~

wherein while setting the congestion information along a forward direction defined from the frame relay network to the ATM network, when said mode setting means receives frame relay data indicating that the congestion information corresponds to "congestion occurs", said mode setting means selects any one of:

a first mode in which "congestion occurs" is set to at least congestion information of an ATM cell corresponding to a segment frame;

a second mode in which "congestion occurs" is set to congestion information of all of ATM cells corresponding to a segment frame; and

a third mode in which "congestion occurs" is set only to congestion information of a final ATM cell corresponding to a segment frame.

3.(currently amended) An apparatus for interfacing a frame relay network and an ATM (Asynchronous Transfer Mode) network, comprising:

congestion information extracting means for extracting congestion information from data of one network of said frame relay network and said ATM network;

mode setting means for combining said extracted congestion information with congestion information of an output side in accordance with a setting condition; and

congestion information writing means for writing the combined congestion information into data of the other network of said frame relay network and said ATM network in accordance with a mode set by said mode setting means.

~~A congestion information setting system as claimed in claim 1 wherein:~~

wherein while setting the congestion information along a forward direction defined from the ATM network to the frame relay network, when said mode setting means receives an ATM cell indicating that the congestion information corresponds to "congestion occurs", said mode setting means selects any one of:

a first mode in which "congestion occurs" is set to at least congestion information of frame relay data when said received ATM cell is a final ATM cell corresponding to a segment frame; and

a second mode in which "congestion occurs" is set to congestion information of frame relay data when said received ATM cell is any one of ATM cells corresponding to a segment frame.

4.(currently amended) An apparatus for interfacing a frame relay network and an ATM (Asynchronous Transfer Mode) network, comprising:

congestion information extracting means for extracting congestion information from data of one network of said frame relay network and said ATM network;

mode setting means for combining said extracted congestion information with congestion information of an output side in accordance with a setting condition; and

congestion information writing means for writing the combined congestion information into data of the other network of said frame relay network and said ATM network in accordance with a mode set by said mode setting means.

~~A congestion information setting system as claimed in claim 1 wherein:~~

wherein while setting the congestion information along a backward direction defined from the ATM network to the frame relay network,

said mode setting means selects any one of:

a first mode in which the congestion information transmitted from the backward direction is directly set to congestion information of frame relay data; and

a second mode in which congestion information of frame relay data is always set to "no congestion".

5.(currently amended) An apparatus for interfacing a frame relay network and an ATM (Asynchronous Transfer Mode) network, comprising:

congestion information extracting means for extracting congestion information from data of one network of said frame relay network and said ATM network;

mode setting means for combining said extracted congestion information with congestion information of an output side in accordance with a setting condition; and

congestion information writing means for writing the combined congestion information into data of the other network of said frame relay network and said ATM network in accordance with a mode set by said mode setting means.

~~A congestion information setting system as claimed in Claim 1 wherein:~~

wherein while setting the congestion information along a backward direction defined ~~from~~ ~~from~~ the frame relay network to the ATM network,

said mode setting means is ~~if~~ comprised of:

congestion transition means for transferring a congestion state in response to a congestion information value of an ATM cell received along the backward direction; and

said mode setting means selects any one of plural modes prepared by combining the state of said congestion transition means with congestion information of frame relay data.

6.(currently amended) An ~~apparatus~~ ~~A congestion information setting system~~ as claimed in Claim 5 wherein:

said congestion transition means is comprised of a timer, and forcibly updates a congestion state when new congestion information is not reached for a predetermined time period.